

In the Claims:

The currently pending claims are as follows.

1. (previously presented) A method for controlling a data forwarding service in a network device comprising a data forwarding device, comprising the steps of:

receiving at the network device a document written in accordance with a markup language and a corresponding document definition, wherein the document describes the data forwarding service by specifying a class of objects for the data forwarding service;

parsing by the network device the received document in accordance with the corresponding document definition, wherein the parsing determines at least one parameter describing the data forwarding service; and

executing the data forwarding service on the network device upon completion of the parsing, in accordance with the parsed document, wherein the executing includes instantiating and launching the data forwarding service in the data forwarding device based on the class of objects for the data forwarding service, and wherein the data forwarding service configures a forwarding architecture in the network device operable to filter network traffic.

2. (original) A method according to claim 1, wherein the step of executing includes the step of interfacing with hardware and software on the network device.

3. (original) A method according to claim 1, wherein the markup language is XML.

4. (original) A method according to claim 3, wherein the corresponding document definition is an XML DTD.

5. (original) A method according to claim 1, further comprising:

retrieving the corresponding definition from a plurality of document definitions in accordance with an identifier in the received document.

6. (original) A method according to claim 5, wherein the plurality of document definitions are provided in a local storage of the network device.

7. (original) A method according to claim 3, further comprising the step of:

retrieving the corresponding document definition from a plurality of document definitions in accordance with an identifier in the received document.

8. (original) A method according to claim 5, wherein the plurality of document definitions are provided in a local storage of the network device.

9. (original) A method according to claim 1, wherein the step of parsing includes the step of parsing from the document an identifier corresponding to the service.

10. (original) A method according to claim 9, wherein the step of parsing further includes the step of parsing from the document runtime parameters corresponding to the service.

11. (original) A method according to claim 5, further including the step of:

instantiating an object corresponding to the service in accordance with the parsed identifier.

12. (original) A method according to claim 10, further including the step of:

instantiating an object corresponding to the service in accordance with the parsed identifier and the parsed runtime parameters.

13. (original) A method according to claim 1, wherein the network device comprises one of a router, a switch, and a hub.

14. (original) A method according to claim 1, wherein the network device comprises a packet forwarding architecture.

15. (original) A method according to claim 1, further comprising the step of preparing a response corresponding to the executed service.

16. (original) A method according to claim 14, further comprising the step of forwarding the response to a remote requestor of the service.

17. (previously presented) A network device for locally performing a data forwarding service in response to a remote request, wherein the network device comprises a data forwarding device, the data forwarding device including a computer readable storage medium having program code stored thereon, the program code comprising:

means for receiving at the network device a document written in accordance with a markup language and a corresponding document definition, wherein the document describes the data forwarding service by specifying a class of objects for the data forwarding service;

means for parsing by the network device the received document in accordance with the corresponding document definitions, wherein the parsing determines at least one parameter describing the data forwarding service; and

means for executing the data forwarding service on the network device upon completion of the parsing, in accordance with the parsed document, wherein the means for executing includes means for instantiating and launching the data forwarding service in the data forwarding device based on the class of objects for the data forwarding service, and wherein the data forwarding service configures a forwarding architecture in the network device operable to filter network traffic.

18. (original) A network device according to claim 17, wherein the means for executing includes means for interfacing with hardware and software on the network device.

19. (original) A network device according to claim 17, wherein the markup language is XML.

20. (original) A network device according to claim 19, wherein the corresponding document definition is an XML DTD.

21. (previously presented) A network device according to claim 17, the program code further comprising:

means for retrieving the corresponding document definition from a plurality of document definitions in accordance with an identifier in the received document.

22. (original) A network device according to claim 21, wherein the plurality of document definitions are provided in a local storage of the network device.

23. (original) A network device according to claim 19, further comprising:

means for retrieving the corresponding document definition from a plurality of document definitions in accordance with an identifier in the received document.

24. (original) A network device according to claim 21, wherein the plurality of document definitions are provided in a local storage of the network device.

25. (original) A network device according to claim 17, wherein the means for parsing includes means for parsing from the document an identifier corresponding to the service.

26. (original) A network device according to claim 25, wherein the means for parsing further includes means for parsing from the document runtime parameters corresponding to the service.

27. (previously presented) A network device according to claim 21, the program code further including:

means for instantiating an object corresponding to the service in accordance with the parsed identifier.

28. (previously presented) The network device according to claim 26, the program code further including:

means for instantiating an object corresponding to the service in accordance with the parsed identifier and the parsed runtime parameters.

29. (original) A network device according to claim 17, wherein the network device comprises one of a router, a switch, and a hub.

30. (original) A network device according to claim 17, wherein the network device comprises a packet forwarding architecture.

31. (previously presented) A network device according to claim 17, the program code further comprising means for preparing a response corresponding to the executed service.

32. (previously presented) A network device according to claim 30, the program code further comprising means for forwarding the response to a remote requestor of the service.

33. (previously presented) A network device for locally performing a data forwarding service in accordance with a received document written in a document markup language, wherein the network device comprises a data forwarding device, the data forwarding device including a computer readable storage medium having program code stored thereon, the program code comprising:

a parser that is adapted to parse the received document in accordance with a document definition to obtain an identifier of the service, wherein the parsing determines at least one parameter describing the data forwarding service by specifying a class of objects for the data forwarding service; and

a service launcher that is adapted to launch the data forwarding service corresponding to the identifier parsed from the received document, wherein the service launcher instantiates and launches the data forwarding service in the data forwarding device upon completion of the parsing based on the class of objects for the data forwarding service, and wherein the data

forwarding service configures a forwarding architecture in the network device operable to filter network traffic.

34. (previously presented) A network device according to claim 33, the program code further comprising:

a network data transfer service that is adapted to communicate with remote devices for receiving the document.

35. (original) A network device according to claim 34, wherein the network data transfer service comprises an HTTP server.

36. (original) A network device according to claim 33, wherein the markup language is XML.

37. (original) A network device according to claim 36, wherein the document definition is an XML DTD.

38. (original) A network device according to claim 33, further comprising a document definition storage coupled to the parser that stores a plurality of document definitions, the parser being further adapted to select the document definition from the stored plurality of document definitions in accordance with a document definition identifier.

39. (original) A network device according to claim 33, further comprising a services storage coupled to the service launcher that stores a plurality of services, the service launcher being further adapted to select the service from the stored plurality of services in accordance with the parsed identifier.

40. (previously presented) A network device according to claim 33, the program code further comprising an Oplet Runtime Environment, the service launcher being further adapted to launch the service under the Oplet Runtime Environment.

41. (original) A network device according to claim 33, further comprising a packet forwarding switch fabric.

42. (original) A network device according to claim 41, wherein the launched service causes changes in how packets are forwarded through the packet forwarding switch fabric.

43. (original) A network device according to claim 41, wherein the launched service monitors performance indicators of how packets are forwarded through the packet forwarding switch fabric.

44. (canceled)

45. (original) A network device according to claim 33, further comprising device APIs for interoperating with device hardware and software for executing the launched services.

46. (original) A network device according to claim 40, further comprising device APIs for interoperating with device hardware and software for executing the launched services.

47. (original) A network device according to claim 41, further comprising device APIs for interoperating with device hardware and software for executing the launched services.

48. (previously presented) A method for causing a network device to locally perform a data forwarding service, wherein the network device comprises a data forwarding device, comprising the steps of:

- identifying the data forwarding service to be performed at a remote client computer;
- preparing at the remote client computer a document written in a markup language in accordance with a document definition, the document including an identifier of the service, wherein the document describes the data forwarding service by specifying a class of objects for the data forwarding service;

- transmitting the document to the network device;

identifying at the network device the document definition corresponding to the transmitted document;

parsing by the network device the transmitted document in accordance with the corresponding document definition, wherein the parsing determines the class of objects for the data forwarding service and at least one parameter describing the data forwarding service; and

executing the data forwarding related service on the network device upon completion of the parsing, in accordance with the parsed document, wherein the executing includes instantiating and launching the data forwarding service on the data forwarding device based on the class of objects for the data forwarding service, and wherein the data forwarding service configures a forwarding architecture in the network device operable to filter network traffic.

49. (original) A method according to claim 48, wherein the markup language is XML.

50. (original) A method according to claim 49, wherein the corresponding document definition is an XML DTD.